



Department of Environmental Protection

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Massachusetts 2017 Air Monitoring Network Plan Response to Comments April 2018

MassDEP operates a network of 22 ambient air quality monitoring stations at locations across the Commonwealth as part of a comprehensive program to provide information about air quality to the public and to determine compliance with National Ambient Air Quality Standards (NAAQS). Each year, MassDEP is required to submit to the U.S. Environmental Protection Agency (EPA) an Air Monitoring Network Plan in accordance with Title 40 CFR Part 58.10. On October 2, 2017, MassDEP published a draft 2017 Network Plan for a 30-day public comment period. MassDEP received comments on the draft Network Plan from EPA and from citizens and local officials. MassDEP has summarized and responded to these comments below.

EPA's Comments

1. Comment: Page 5, Ozone Network – We understand that MassDEP intends to establish a new ozone monitor in the Pittsfield Consolidated Metropolitan Statistical Area (CMSA). A location has been identified but it is extremely important that this site be established soon because the Pittsfield area has been lacking a required ozone monitor per CFR requirements since the shutdown of the Mt. Greylock site at the end of 2014.

Response: MassDEP is in the process of installing a new monitoring station in Pittsfield that will begin monitoring ozone this summer.

2. Comment: Page 5, Ozone Network – We understand and agree with MassDEP discontinuing the Newburyport site due to new ozone monitoring regulations that reduce the number of PAMs sites in Massachusetts and that Haverhill is sufficient for ozone monitoring in this area.

Response: MassDEP acknowledges EPA's agreement with discontinuing the Newburyport site.

3. Comment: Page 6, Sulfur Dioxide Network – MassDEP has determined a location for the new Springfield monitoring station due to the potential sale of the Liberty Street property and EPA has approved this new location. This network plan should reflect that information. In

addition, MassDEP should consider disinvesting in low value SO₂ monitors and ensure all remaining SO₂ monitors measuring low concentrations are appropriate for the task.

Response: MassDEP has installed a monitoring station at the new Springfield site and expects to begin monitoring in May 2018. MassDEP will ensure its SO₂ monitors can evaluate low concentrations and will continue to evaluate ways to optimize its SO₂ monitoring network.

4. Comment: Page 7. Nitrogen Oxides Network – MassDEP discusses the near-roadway monitoring requirements that were established when EPA revised the NO₂ NAAQS. Under this rule, there are requirements to operate two near-road sites in the Boston-Cambridge-Newton, MA-NH metropolitan area, and one site in each of the Providence-Warwick, RI-MA; metropolitan area. The Providence, RI, near-road site established by RI DEM has met the obligation in the Providence-Warwick, RI-MA area, and your Von Hillern Street monitor in Boston is meeting the obligation for the first of the required near-road monitors in the Boston-Cambridge-Newton, MA-NH metropolitan area.

We realize that MassDEP has begun installing a second near-road monitor in Chelmsford, MA. It is important that this site is operating as soon as possible since it is overdue. We congratulate you on your progress in this regard.

Response: MassDEP has installed the new monitoring station and expects to begin monitoring by the start of summer 2018. MassDEP appreciates the support EPA has provided for this 2nd near-road site.

5. Comment: Page 9. PM₁₀. We note and agree with the closure of the Liberty Street PM₁₀ monitor once the relocated site is fully operational.

Response: MassDEP acknowledges EPA's agreement with closing the Liberty Street site once the new Springfield site is operational.

6. Comment: Page 10. PM_{2.5} Network – On January 15, 2013, EPA revised the PM_{2.5} standard. In that rule, EPA also established that all continuous PM_{2.5} FEM monitors operating for more than 24 months should be used for comparison to the NAAQS unless a State specifically requires the data to be excluded under 40 CFR 58.11(e) and EPA approves that request. All of MassDEP's BAMs have a Federal Equivalent Method (FEM) designation. We are pleased that MassDEP will use data from all its FEM monitors for comparison to the NAAQS.

We note that there are number of potential resource saving opportunities relative to the PM_{2.5} network, particularly for filter-based FRMs, if the continuous FEM were considered the primary monitor at the site (for quality assurance purposes). We strongly recommend that in all cases where a FEM (BAM) is operating, that it be identified as the "primary" monitor. This will allow you to eliminate, or reduce the frequency of FRMs that are required. For example, we note and acknowledge your reduced sampling frequency at North Street FRMs (25-025-0043) because an FEM is located there as well. However, you could eliminate the second FRM entirely. We note and agree with the closure of one of the collocated PM_{2.5} filter-based monitors at Brocton (25-

023-0005), and filter based FRMs at Fall River (25-005-1004) and Lynn (25-009-2006), but even at that, you will have 7 sites where both FEM and filter based FRM PM_{2.5} monitors are operating. We also suggest MassDEP to take a closer look at the possibility of reducing some of the remaining 1 in 3 day FRM sampling frequencies to 1 in 6 day sampling for further cost savings.

We understand that MassDEP will continue to work to establish a new continuous PM_{2.5} monitor in the Pittsfield CMSA. We understand that the existing city of Pittsfield locations may be closed when these few sites are established.

We are happy to see that MassDEP has installed a new monitoring site in North Adams to measure PM_{2.5} as well as black carbon. Please advise if this monitor will be reporting to pollutant code 88101 for NAAQS compliance purposes. Also, it should be included on the PM_{2.5} Monitor Map.

Response: MassDEP affirms that at all monitoring stations where a continuous FEM PM_{2.5} monitor is operating, it is the “primary” monitor and is being used for NAAQS compliance. MassDEP has added the new North Adams monitoring site to the PM_{2.5} maps on pages 3 and 11 of the Plan. This monitor will report pollutant code 88101 for NAAQS compliance purposes. MassDEP will continue to evaluate opportunities to rely more on continuous FEM monitors and reduce filter-based monitoring as EPA has recommended.

Comments Requesting Air Monitoring Station in the Fore River Basin

MassDEP received a number of comments from citizens and local officials requesting an air monitoring station in the Fore River Basin area that are summarized below.

8. Comment: MassDEP should establish a permanent air monitoring station in the Fore River Basin area (Weymouth, Braintree and Quincy). This area has a number of industrial facilities, including a sludge pelletizing plant, a natural gas power plant, an oil and gas depot, and a biofuel refinery. It also is a residential area with many families and schools. It is essential that accurate readings of toxic emissions are done here for the health and safety of the residents. Air quality monitoring also should encompass Hingham. The closest monitoring station appears to be at Blue Hills Reservation in Milton, which does not represent air quality in the industrialized Fore River Basin area.

Independent air quality monitoring analyzed by certified laboratories found benzene as much as four times over the MassDEP health-based Thresholds Effects Level (TEL), as well as other toxics above MassDEP’s guidelines. Benzene causes leukemia and there are many young children living in this area who are vulnerable. Many people have cancer in the area, young and old. The proposed compressor station would add toxic emissions and it is essential that MassDEP monitors air quality in the area, including particulate matter (PM₁₀), fine particles (PM_{2.5}), and toxic volatile organic compounds (VOCs).

The independent air testing results raise concerns about current emissions from the industrial facilities in the area. Several toxics, including benzene and toluene, were found to be many

times above safe levels, but have not been addressed because they have not been officially monitored. The area should not be left without an air monitoring station, which is needed to ensure that industry in the area is complying with state standards and that the air is safe for residents to breathe. A monitoring station would bring the focus needed from local and state government in order to work on improving local air quality.

Response: MassDEP recognizes the concerns raised by citizens and local officials regarding air quality in the Fore River Basin area. MassDEP has reviewed the results of the citizen-initiated independent air monitoring that identified concentrations of certain toxic VOCs raising concerns. As noted in the Network Plan, MassDEP plans to conduct focused air toxics monitoring in the Fore River Basin area of Weymouth, Quincy, and Braintree, as directed by Governor Baker, working in conjunction with the Massachusetts Department of Public Health to prepare a health impact assessment that will document background air levels in the area and the health status of the community, and consider potential impacts of the proposed Atlantic Bridge natural gas compressor station project. The results of this air monitoring will inform the need for any additional longer-term monitoring. MassDEP will work with local officials and citizens on the scope of the monitoring and to identify suitable monitoring locations.

Other Comments

9. Comment: The monitoring data that is being collected would be much more useful if it was more publicly accessible, especially for toxic compounds that cause cancer. Monitoring results for carcinogenic and suspected carcinogenic compounds should be published in all major newspapers serving the state on a quarterly basis with a comparison to the health standards.

Response: MassDEP makes monitoring data for NAAQS pollutants available on its MassAir website, including near real-time data where available and historical data. MassDEP measures toxic volatile organic compounds and some toxic metals at the Boston Harrison Avenue monitoring station, which is part of the National Air Toxics Trends network, and measures toxic VOCs at its Lynn monitoring station. MassDEP publishes a summary of toxics monitoring results for these sites, with a comparison to ambient air health guidelines, in its annual Air Quality Report and makes more detailed toxics monitoring results available upon request.

10. Comment: MassDEP's hazardous waste cleanup program regulated under the Massachusetts Contingency Plan (MCP) has generated considerable indoor air data, which is regularly compared with ambient air. Often the ambient air bears more toxics than the indoor air of buildings underlain by contaminated land. Indoor air exceedances must be promptly addressed under the MCP but ambient air is not addresses. All data collected for MCP sites becomes public record. Ambient air data generated under the MCP should be regionally mapped and linked with the data collected by MassDEP's Ambient Air Quality Monitoring Network.

Response: MassDEP monitors air toxics at two sites (Boston and Lynn) to determine trends in toxics concentrations typical of an urban environment. MassDEP's waste site cleanup program addresses soil and groundwater contamination at specific sites, including infiltration of volatile contaminants into indoor air. Any volatile contaminants that migrate to the outdoor air from a cleanup site would be very localized and addressed through the cleanup activities. Such levels

would not be representative of overall air quality and would not be generally comparable to levels from MassDEP's monitoring at the Boston and Lynn sites. MassDEP publishes toxics monitoring results from its Boston and Lynn monitoring stations in its annual Air Quality Report and all monitoring data is a public record and available upon request.

11. Comment: Air toxics vary greatly depending on proximity to sources. Temporal changes are probably reflective of changes in emissions from nearby sources as opposed to being regional phenomena. MassDEP should consider periodically moving monitoring locations near known sources for comparison to air health guidelines.

Response: MassDEP monitors air toxics at its Boston, Harrison Avenue and Lynn monitoring station. These are permanent monitoring stations specifically approved and funded by EPA in accordance with EPA's siting criteria. These stations take measurements to determine trends in toxics concentrations typical of an urban environment. It would not be possible to periodically move these monitoring stations.

12. Comment: It is not apparent what methodologies are being used to test the air. Standard air quality testing methods should be used in the monitoring program to ensure uniformity.

Response: MassDEP uses standardized test methods and protocols in all of its monitoring work using EPA mandated monitoring methods. EPA strictly oversees methods used by states to collect ambient air quality data and further conducts frequent Quality Assurance Audits to ensure that agencies under their oversight adhere to these methods and the associated quality goals.